

Scientific Note

A Nematode Parasite of *Erebia occulta* Roos & Kimmich (Nematoda; Lepidoptera: Satyridae)

According to the list published by Poinar (1975, *Entomogenous Nematodes*, Brill, Leiden), nematode parasites have been recorded for 232 lepidopteran species, of which only 20 are butterflies. Parasitism records for North American species include: *Pieris rapae* (L.) Pieridae; *Polygonia comma* (Harris), *P. interrogationis* (Fabricius), and *Vanessa atalanta* (L.), all Nymphalidae (Puttler and Thewke, 1971, *Ann. Entomol. Soc. Am.*, 64:1177–1178). As of November 1986, Poinar (*in litt.*) had no nematode parasite records for the Satyridae. The nematode group responsible for parasitism in butterflies is the Mermithidae, which are obligate parasites. They have no free-living or nourishment-receiving stages outside of their hosts. Most of the moth nematode parasites are also Mermithidae, but there are 6 records of Steinernematidae, which behave as both facultative and obligate parasites, and one record for Rhabditidae, which are facultative parasites.

In Alaska on the morning of 3 July, 1986 I collected a male specimen of *Erebia occulta* Roos & Kimmich (Satyridae) as it was flying over a low scree slope at mile 41.5 Nome-Council Road (64°39'N, 164°20'W, 30–120 m). The specimen was papered and subsequently relaxed for spreading. When removed from the relaxing chamber, about 5 mm of a mermithid was found protruding from the 7th abdominal segment of the specimen, through which it had apparently bored a hole before dying. Using forceps, the worm was carefully extracted. When measured, it extended 10.1 cm. The butterfly's abdomen measured 9 mm. The nematode was placed in 70% isopropanol and sent for identification to Dr. George O. Poinar, Jr. at the University of California, Berkeley, who determined that it was a "postparasitic juvenile and could not be identified past family level (Mermithidae)."



Figure 1. Specimen of *Erebia occulta* from which 10.1 cm juvenile mermithid was extracted. Scale = cm.

The butterfly from which the mermithid was extracted behaved normally in the field, and from its somewhat damaged condition it must have been on the wing for several days prior to capture. It is shown in Fig. 1, and its parasite in Fig. 2.

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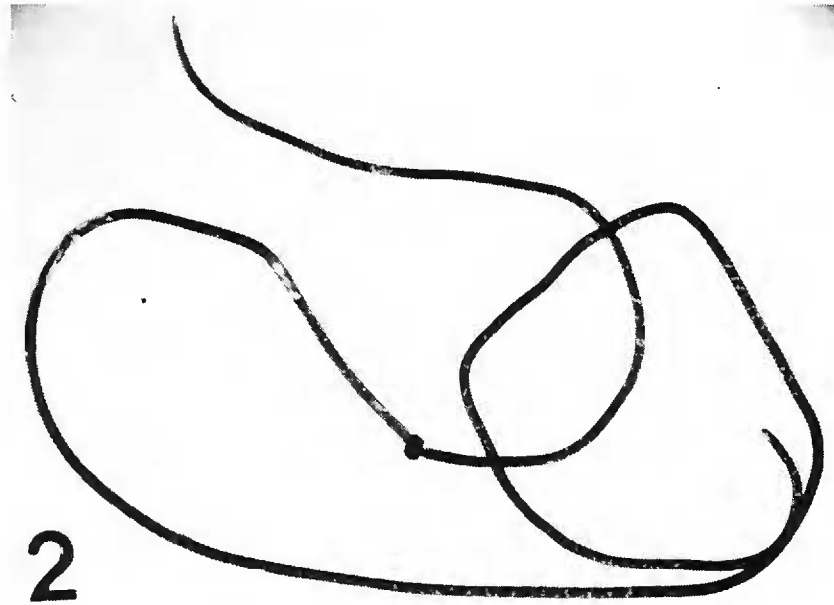


Figure 2. Juvenile mermithid extracted from male specimen of *Erebia occulta*.